

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-50 (Canceled)

51. (Currently Amended) An ejector pin for a mold comprising:

- (a) a-an ejector pin head that is receivable in an ejector plate assembly of the mold;
- (b) a-an ejector pin barrel including an end at which the ejector pin head is disposed, the barrel having a length that is capable of being cut and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled, wherein the barrel has a hardened portion and a softer portion that is softer than the hardened portion, the softer portion having an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled; and
 - wherein the ejector pin head and ejector pin barrel are reciprocable relative to the mold;
 - wherein the ejector pin head has a top surface, a bottom surface, a lengthwise extent greater than the width of the ejector pin barrel, a bore that extends through the top surface and bottom surface of the ejector pin head, a recessed land in one of the top surface and the bottom surface of the ejector pin head that encircles the through bore with the recessed land defined by a bottom wall and a sidewall extending outwardly from the bottom wall and having an arcuate portion and a straight portion;
 - wherein the ejector pin barrel has a sidewall with a flat in it located adjacent the one end of the ejector pin barrel, with the end of the ejector pin barrel having an end wall that is received in the recessed land with the flat of the ejector pin barrel sidewall bearing against the straight portion of the recessed land sidewall opposing relative rotation between the ejector pin barrel and the ejector pin head, and the ejector pin has its other end disposed toward a cavity of the mold;
 - a fastener that extends through the through bore in the ejector pin head and into the one end of the ejector pin barrel fixing the ejector pin head to the ejector pin barrel such that the ejector pin barrel bears against the ejector pin head; and

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

wherein the ejector pin head, the ejector pin barrel and the fastener are reciprocable in unison.

52. (Canceled)

53. (Canceled)

54. (Currently Amended) ~~As~~ The ejector pin of claim ~~53~~51, further comprising an insert received in a pocket in the barrel of the pin that is disposed at an end that is opposite the end at which the head is mounted.

55. (Original) ~~As~~ The ejector pin of claim 54, wherein the insert comprises an indicia-imprinting insert, and further comprising a cup mounted to the end of the barrel that is opposite the end at which the head is mounted and wherein the indicia-imprinting insert is removably received in the cup.

56. (Canceled)

57. (Canceled)

58. (Canceled)

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Canceled)

64. (Canceled)

65. (Canceled)

66. (Canceled)

67. (Canceled)

68. (Canceled)

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

69. (Currently Amended) An ejector pin for a mold comprising:

(a) a-an ejector pin head that is receivable in an ejector plate assembly;

(b) aan ejector pin barrel having a width less than the lengthwise extent of the ejector pin head, having a hardened portion at one end that contacts a part being molded to eject that part and a portion that is softer than the hardened portion at an end at which the head is disposed, the barrel having a length that is capable of being cut to form the an end at which the ejector pin head is disposed and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled, and having a length after being cut that is longer than its width;

(c) a fastener that mounts the ejector pin head to the ejector pin barrel; and

(d) wherein the ejector pin head has a surface with a recessed land formed therein that is defined by a sidewall that includes a locator flat, wherein the ejector pin barrel has a sidewall with a locator flat disposed at the end of the ejector pin barrel at which the ejector pin head is disposed, and wherein the end of the ejector pin barrel at which the ejector pin head is disposed is received in the recessed land in the surface of the ejector pin head with the sidewall of the recessed land encircling the sidewall of the ejector pin barrel and the locator flat of the sidewall of the recessed land mating with the locator flat of the sidewall of the ejector pin barrel preventing relative rotation between the ejector pin barrel and the ejector pin head-one of the head and the barrel adjacent the end that is capable of being cut has a locator flat and the other one of the head and the barrel adjacent the end that is capable of being cut has a complementary locator wall that mate to oppose relative rotation between the head and the barrel when the head is mounted to the barrel.

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

70. (Currently Amended) An ejector pin for a mold comprising:

(a) ~~a~~ an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of end walls between which an outer sidewall is disposed with one of the end walls having a recessed land formed therein that includes a locator surface;

(b) an ejector pin barrel of generally cylindrical construction that has a width less than the lengthwise extent of the ejector pin head and a length greater than its width, the ejector pin barrel comprising an outer sidewall having a locator surface disposed adjacent one end of the ejector pin barrel with the barrel locator surface having a shape that is complementary to the shape of the head locator surface, and wherein the one end of the ejector pin barrel is received in the recessed land with the barrel locator surface mating with the head locator surface opposing relative rotation between the ejector pin head and the ejector pin barrel and the other end of the ejector pin barrel being disposed toward a cavity of the mold having a hardened portion at one end that contacts a part being molded to eject that part and a portion that is softer than the hardened portion at an end at which the head is disposed, the barrel having a length that is capable of being cut to form the end at which the head is disposed and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled; and

(c) a fastener that that attaches the ejector pin head to the ejector pin barrel, wherein the fastener comprises a fastener head that engages the ejector pin head and a threaded shank that is threadably received in the ejector pin barrel wherein the head is friction-welded or inertia welded to the cut end of the barrel.

71. (Canceled)

72. (Canceled)

73. (Canceled)

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

74. (Currently Amended) An ejector pin for a mold comprising:

(a) a an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of generally parallel and spaced apart end walls with one of the end walls having a recessed land formed therein that is defined by a bottom wall and a sidewall having a plurality of locator notches formed therein, and the head including a threaded bore disposed in the bottom wall of the recessed land;

(b) a generally cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising an outer sidewall extending between a pair of ends of the ejector pin barrel, with the sidewall having a threaded portion disposed adjacent one of the ends of the ejector pin barrel that is threadably received in the threaded bore in the bottom wall of the recessed land of the ejector pin head and the sidewall including an axially extending groove formed therein that extends along at least part of the threaded portion, and wherein the other end of the ejector pin barrel communicates with a cavity of the mold including an end at which the head is disposed, the barrel having a length that is capable of being cut and thereby decreased in length so as to accommodate the mold into which the ejector pin is to be assembled, wherein the barrel has a hardened portion with a barrel end and a softer portion that is softer than the hardened portion, the softer portion having an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled, and wherein, after the barrel has been cut to decrease the length of the barrel, the head is integrally formed in the softer portion;

(c) a ring that encircles the outer sidewall of the ejector pin barrel and is received in the recessed land of the ejector pin head disposed between the ejector pin barrel and the sidewall of the recessed land of the ejector pin head, the ring comprising a radially inwardly extending projection that is received in the groove in the sidewall of the ejector pin barrel and a plurality of spaced apart and radially outwardly extending projections that are each received in one of the plurality of notches in the sidewall of the recessed land of the ejector pin head opposing relative rotation between the ejector pin barrel and the ejector pin head;

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

(ed) wherein the ejector pin barrel, the ejector pin head and the ring are is-reciprocable relative to the mold.

75. (Currently Amended) An ejector pin for a mold comprising:

(a) a an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of arms curved to define an arcuate channel therebetween that is internally threaded with the end of one of the arms facing and spaced apart from the end of the other one of the arms;

(b) a a cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising an outer sidewall extending between a pair of ends of the ejector pin barrel with the sidewall having a threaded portion disposed adjacent one of the ends of the ejector pin barrel that is received in the threaded channel formed between the curved arms of the ejector pin head including an end at which the head is disposed, the barrel having a length that is capable of being cut and thereby decreased in length so as to accommodate the mold into which the ejector pin is to be assembled, wherein the barrel has a hardened portion with a barrel end and a softer portion that is softer than the hardened portion, the softer portion having an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled, and wherein, after the barrel has been cut to decrease the length of the barrel, the head is attached to an end of the softer portion of the barrel; and

(c) a fastener that engages both arms of the ejector pin head adjacent the end of each arm clamping the arms around the threaded portion of the ejector pin barrel to retain the ejector pin barrel in the ejector pin head wherein the barrel is reciprocable relative to the mold.

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

76. (New) An ejector pin for a mold comprising:

(a) a disc-shaped ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of generally parallel end walls having a bore extending therethrough with one of the end walls having a recessed land formed therein that is defined by a flat bottom wall and a sidewall that surrounds the bore with the sidewall being curved with a portion that is straight;

(b) a cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising a pair of ejector pin barrel ends and a sidewall that extends between the ejector pin barrel ends with one of the ejector pin barrel ends received in the recessed land being flat and having a circular periphery with a portion of the periphery being straight and the other one of the ejector pin barrel ends being disposed toward a cavity of the mold including an end at which the head is disposed, the barrel having a length that is capable of being cut and thereby decreased in length so as to accommodate the mold into which the ejector pin is to be assembled, wherein the barrel has a hardened portion with a barrel end and a softer portion that is softer than the hardened portion, the softer portion having an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled, and wherein, after the barrel has been cut to decrease the length of the barrel, the head is attached to an end of the softer portion of the barrel;

(c) wherein the sidewall of the recessed land surrounds the periphery of the ejector pin barrel end received in the recessed land with the ejector pin barrel end abutting against the bottom wall of the recessed land and the straight portion of the ejector pin barrel end bearing against the straight portion of the sidewall of the recessed land opposing relative rotation between the ejector pin head and the ejector pin barrel an insert carried by the hardened barrel end that has an imprintable indicia thereon; and

(d) a fastener comprising a threaded shank that extends outwardly from an enlarged head wherein the threaded shank is oriented in an axial direction parallel to a longitudinal axis of the ejector pin barrel, extends through the bore in the ejector pin head, and engages the ejector pin barrel end attaching the ejector pin head to the ejector pin barrel with the fastener head

Serial No. 10/021,770 to Klaus WIEDER
Art Unit: 1722

Reply to Office Action of March 19, 2004

disposed flush with the other one of the end walls of the ejector pin head wherein the barrel is
reciprocable relative to the mold.